Proof of invention

This document shows the conception of the invention claimed in U.S. Patent Application No. 09/750,009 as disclosed in the documents

- "Highly Scaleable Multi-tier Message System", dated Sept. 19, 2000, which in the following shall be referred to as "**Invention Description**".

- "SCALEABLE MESSAGE SYSTEM", in the version dated October 6, 2000, which in the following shall be referred to as "**Application Draft**".

SYNOPSIS OF CLAIMED MATTER

Independent claims as disclosed in Invention Description

The subject matter of the independent claims 1, 7, 13, 17, 20, 21 is disclosed in the Invention Description. In the following, reference is first made to claim 1.

Claim 1, as currently pending is

a) A message system for delivering data in the form of messages between message clients:

b) the message system being configured to receive messages from message producing clients and to forward messages to message consuming clients;

c) comprising a server cluster containing a group of client manager nodes,

d) each client manager node of said group of client manager nodes comprising means for connecting to clients, means for managing client connections, and means or forwarding messages received from message producing clients to message manager nodes, and means for forwarding messages received from message manager nodes to message consuming clients;

e) the server cluster further containing a group of message manager nodes being configured differently from the client manager nodes,

f) each message manager node comprising means for storing and distributing messages, said messages comprising a destination information addressing a destination, said destination being at least one of a queue or a topic;

g) the system further comprising communication channel means for providing a multicast communication channel for forwarding messages between said at least one client manager node and said at least one message manager node.

where reference letters a-g are inserted for further reference.

The disclosure of the features references in this manner is shown by the reference letters manually inserted on pages 2-4 of the Invention Description.

Independent method **claim 7** is directed to a method for running the message system with the same features as claim 1.

Exhibit "D"

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Independent claims **13, 17** and **20** are directed to ꞏ━━━━━━━ ᴄᴏmputer program products for implementing the separate parts of the message system of claim 1 (i.e. a client manager, a message manager and a message client, repectively).

Claim 21 corresponds to claim 1, with the additional feature in the last paragraph disclosed in the Invention Description, on page page 3, lines 39-42:

When a destination exists on more than one MM, one of them is designated as the primary and is responsible for providing all of the services of the destination. All others MM's containing that destination are backups, which maintain the same state as the primary, but do not provide any services unless the primary fails to function

Independent claims as disclosed in Application Draft

Claim 1 derives from claim 1 of the Application Draft, with additional features disclosed in the Application Draft on page 7, lines 7-8 (regarding topics and queues), and page 8, lines 5-14 (regarding the forwarding of messages).

Claim 7 comprises the features of claims 7 and 8 of the Application Draft.

Regarding the remaining independent claims 13, 17, 20 and 21, the above remarks made with respect to the Invention Description hold with respect to the Application draft as well.

Dependent claims

Claims 2-6 are the same as claims 2-6 of the Application Draft, except for the destinations being at least one of a queue or a topic. This feature is disclosed in the Application Draft on page 7, lines 7-9 and in the Invention Description on page 3, lines 37-39:

Messages are stored in a destination until they are consumed. The destination can be a queue or a topic, depending on the actual service desired. These terms are defined in the JMS specification. Each destination exists on one or more MM's..

Claims 9 and 10: The essence of claim 9 is disclosed the Application Draft on page 7, lines 9-13 and in the Invention Description at page 3, lines 39-42:

When a destination exists on more than one MM, one of them is designated as the primary and is responsible for providing all of the services of the destination. All others MM's containing that destination are backups, which maintain the same state as the primary, but do not provide any services unless the primary fails to function

and the details of claim 9 and the features of claim are disclosed in section 4.5, in particular in "4.5.3 MM Fail-over".

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Claim 11 is disclosed in section "**4.3 Very Large Message Handling (VLMH)**".

Claim 12 describes the two embodiments of the invention according to Drawing 2 of the Invention Description.